2001 MERCEDES-BENZ

ML320 & ML430

BUZZERS, RELAYS & TIMERS

BUZZERS, RELAYS & TIMERS LOCATION

Component	Component Location
Alarm Horn Relay	In left side of engine compartment, in fuse & relay box.
Blower Motor Relay	In left side of engine compartment, in fuse & relay box.
Central Locking (All Doors Lock Relay)	In left side of engine compartment, in fuse & relay box.
Central Locking (Left Front Door & Fuel Filler Flap Unlock Relay)	In left side of engine compartment, in fuse & relay box.
Central Locking (Right Front Door & Rear Doors Unlock Relay)	In left side of engine compartment, in fuse & relay box.
Central Locking (Tailgate Unlock Relay)	In left side of engine compartment, in fuse & relay box.
Circuit 15 Relay	In left side of engine compartment, in fuse & relay box.
Circuit 15 Relay	In right front footwell fuse & relay box.
Circuit 15 Delayed Relay	In left side of engine compartment, in fuse & relay box.
Circuit 58 Relay	In left side of engine compartment, in fuse & relay box.
Circuit 58L Relay (W/ DRL)	In left side of engine compartment, in fuse & relay box.
Circuit 58R Relay (W/ DRL)	In left side of engine compartment, in fuse & relay box.
Circulation Pump Relay	In left side of engine compartment, in fuse & relay box.
Convenience Relay	In left side of engine compartment, in fuse & relay box.
Differential Lock Vacuum Pump Relay	In left side of engine compartment, in fuse & relay box.
Engine Cooling Fan Stage 1 Relay	In left side of engine compartment, in fuse & relay box.
ESP Stoplight Suppression Relay	In left side of engine compartment, in fuse & relay box.
Front Foglight Relay	In left side of engine compartment, in fuse & relay box.
Front Wiper Motor Relay	In left side of engine compartment, in fuse & relay

	box.
Fuel Pump Relay	In left side of engine compartment, in fuse & relay box.
Headlamp Cleaning System Relay	In right front footwell fuse & relay box.
Heated Rear Window Relay	In right front footwell fuse & relay box.
Heater Relay	At right kick panel.
Heater Relay (Stage 1)	At right kick panel.
Heater Relay (Stage 2)	At right kick panel.
High Pressure/Return Pump Relay	In left side of engine compartment, in fuse & relay box.
Left Front Power Window Relay	In left side of engine compartment, in fuse & relay box.
Left Turn Signal Relay	In left side of engine compartment, in fuse & relay box.
Low Beam Headlamp Relay (W/ DRL)	In left side of engine compartment, in fuse & relay box.
Rear Foglight Relay	In left side of engine compartment, in fuse & relay box.
Rear Wall Door Washer Pump Relay	In left side of engine compartment, in fuse & relay box.
Rear Window Defroster Relay	In right front footwell fuse & relay box.
Right Front Power Window Relay	In left side of engine compartment, in fuse & relay box.
Right Turn Signal Relay	In left side of engine compartment, in fuse & relay box.
Seat Comfort Relay	In right front footwell fuse & relay box.
Seat Heater Relay (Stage 1)	On underside of left/right front seat.
Seat Heater Relay (Stage 2)	On underside of left/right front seat.
Secondary Air Injection Pump Relay	In left side of engine compartment, in fuse & relay box.
Starter Relay	In left side of engine compartment, in fuse & relay box.
Two-Tone Horn Relay	In left side of engine compartment, in fuse & relay box.

CIRCUIT PROTECTION DEVICES

CIRCUIT PROTECTION DEVICES LOCATION

Component	**Component Location**
E-Box	In left side of engine compartment.
Fuse & Relay Box	In left side of engine compartment, in E-box. See **Fig. 1** .
Right Front Footwell Fuse & Relay Box	Below right side of dash, behind kick panel. See

	Fig. 1 .

CONTROL UNITS

CONTROL UNITS LOCATION

Component	Component Location
Acoustimass Bass Module	Under driver's seat. See **Fig. 1** .
All Activity Module (AAM)	In left side of engine compartment, in E-box. See **Fig. 1** .
ASR/ETS/ESP Hydraulic Unit	In left side of engine compartment, below washer bottle.
Electronic Selector Lever Control Module	Under center console, at base of selector lever assembly.
Engine Control Module (ME-SFI)	In left side of engine compartment, in E-box. See **Fig. 1** .
ESA Control Module (Right/Left)	Under respective front seat.
ESP/SPS/BAS Control Module	In left side of engine compartment, in E-box. See **Fig. 1** .
ETC Control Module	Behind center of dash. See **Fig. 1** .
Extended Activity Module (EAM)	Behind left side of dash.
Global Positioning System (GPS) Control Module	Behind center of dash.
MB-Immobilizer Control Module	In top right side of steering column. See **Fig. 1** .
Restraint System Control Module	Under center console.
SRS Control Module	Below front of center console. See **Fig. 1** .
Suction Cooling Fan Control Module	At front of engine compartment.
Trailer Turn Signal Control Module	Integral to trailer harness.
Transfer Case Control Module	Below center console, behind shift assembly. See **Fig. 1** .
Trip Computer Control Module	In front of roof.
Xenon Headlamp Control Module (Left/Right)	Behind respective headlamp.
Xenon Headlamp Ignition Module (Left/Right)	Behind respective headlamp.

MOTORS

MOTORS LOCATION

Component	Component Location
Blend Air Flap Actuator Motor	Behind right side of dash.
Blower Motor	Under right side of dash.
Coolant Circulation Pump	In right rear of engine compartment.
Differential Lock Vacuum Pump	On left side of engine compartment.
Electric Air Pump	On front center of engine.
Filler Flap CL Actuating Motor	In left rear cargo area, behind trim.

Fuel Pump	In top of fuel tank.
Headlamp Range Adjustment Motor (Right/Left)	Behind respective headlamp.
Headlamp Washer Pump	In left front of engine compartment, on side of washer fluid reservoir.
In-Car Temperature Sensor Aspirator Blower	Behind center of dash.
Lamella Sun Roof Motor (Left/Right)	At rear of roof.
Module Box Blower Motor	In left side of engine compartment, in E-box.
Rear Wall Door Washer Pump	In left side of engine compartment, on side of washer fluid reservoir.
Tailgate Window Wiper Motor	In liftgate, behind trim.
Transfer Case Range Selection Motor	On left rear of transfer case.
Windshield Washer Pump	In left front of engine compartment, on washer fluid reservoir.
Wiper Motor	At left rear of engine compartment, under plenum cover.

SENDING UNITS & SENSORS

SENDING UNITS & SENSORS LOCATION

Component	Component Location
ABS Lateral Acceleration Sensor	Below center console, behind shift assembly.
Camshaft Hall Effect Sensor	On right front of engine.
Crankshaft Position (CKP) Sensor	On left rear of engine.
ECT Sensor	On front center of engine.
ESP Brake Pressure Sensor No. 1	In left rear of engine compartment.
ESP Brake Pressure Sensor No. 2	In left rear of engine compartment.
Freeze Protection Temperature Sensor	Behind right side of dash, in evaporator.
Front Axle Sensor	Behind right front wheel.
Fuel Level Sensor	On top of fuel tank.
Fuel Tank Emissions Monitoring Pressure Sensor	In left rear side of cargo area, behind trim on fuel filler pipe.
Hot Film MAF Sensor	In right side of engine compartment.
In-Car Temperature Sensor	Behind center of dash.
Knock Sensor No. 1 (KS 1)	On right side of engine, below intake manifold.
Knock Sensor No. 2 (KS 2)	On left side of engine, below intake manifold.
Left Front Brake Pad Wear Sensor	Behind left front wheel.
Left Front VSS	Behind left front wheel.
Left Rear Brake Pad Wear Sensor	Behind left rear wheel.
Left Rear VSS	Behind left rear wheel.
Membrane Travel Sensor	Integral to brake booster.
Oil Sensor	On lower right front of engine.
Outside Temperature Indicator Temperature Sensor	Behind left side of front grille.

Outside Temperature Sensor (A/C)	Behind lower right side of dash.
Oxygen Sensor (O2S 1) (Left) (Before TWC)	Under left side of vehicle, in left exhaust downpipe.
Oxygen Sensor (O2S 2) (Left) (After TWC)	Under left side of vehicle, in left exhaust pipe.
Oxygen Sensor (O2S 1) (Right) (Before TWC)	Under right side of vehicle, in right exhaust downpipe.
Oxygen Sensor (O2S 2) (Right) (After TWC)	Under right side of vehicle, in right exhaust pipe.
Pedal Value Sensor	In left rear corner of engine compartment.
Pressure Sensor	On right front of engine.
Rain Sensor	At front of headliner.
Rear Axle Sensor	Behind right rear wheel.
Refrigerant Pressure Sensor	In left front of engine compartment.
Right Front Brake Pad Wear Sensor	Behind right front wheel.
Right Front VSS	Behind right front wheel.
Right Rear Brake Pad Wear Sensor	Behind right rear wheel.
Right Rear VSS	Behind right rear wheel.
Steering Angle Sensor	Below driver's side of dash.
Yaw Rate Sensor	Below center console, behind shift assembly.

SOLENOIDS & SOLENOID VALVES

SOLENOIDS & SOLENOID VALVES LOCATION

Component	Component Location
Activated Charcoal Canister Shutoff Valve	Under rear of vehicle, above spare wheel.
Adjustable Camshaft Timing Solenoid	At front center of engine.
AIR Pump Switchover Valve	On right front of engine.
EGR Switchover Valve	On top rear of engine.
Purge Control Valve	In left rear corner of engine compartment.
Shifting Induction Pipe Switchover Valve	On top front center of engine.
Solenoid Valve (BAS)	Integral to brake booster.
Throttle Valve Control Element	On center rear of engine.
Valve Unit (ETC)	In transmission.

SWITCHES

SWITCHES LOCATION

Component	Component Location
Brake Fluid Level Switch	In brake fluid reservoir.
Electronic ECL Switch	In left rear of engine compartment.
Engine Hood Switch (ATA)	In left rear corner of engine compartment.
Kickdown Switch	Below accelerator pedal.
Left Front Seat Belt Buckle Switch	In driver's seat belt buckle.

Parking Brake Switch	On parking brake support bracket.
Passenger's Seat Belt Switch	In passenger's seat belt buckle.
Release Switch (BAS)	Integral to brake booster.
Right Front Seat Belt Buckle Switch	In passenger's seat belt buckle.
Rotary Tumbler Trunk Lid Microswitch	Part of tailgate latch assembly.
Stoplight Switch	On brake pedal support.

MISCELLANEOUS

MISCELLANEOUS LOCATION

Component	Component Location
Alarm Horn	In left rear corner of engine compartment.
Alarm Siren W/ Auxiliary Battery	In left rear corner of engine compartment.
Antenna Coil (Left)	At left side of rear window, behind trim.
Antenna Coil (Right)	At right side of rear window, behind trim.
Antenna Splitter	On right side of liftgate.
Audio Amplifier	Behind left side of dash.
Blower Motor Preresistor Group	Under right side of dash, in blower assembly.
Data Link Connector (DLC)	Below left side of dash.
Diagnostic Module (OBD II) Scan Tool Connector	Below left side of dash.
Driver's ETR Squib	On base of left "B" pillar, behind trim.
FM/AM Amplifier	In liftgate, behind trim.
Front Passenger ETR Squib	On base of right "B" pillar, behind trim.
Garage Door Transmitter	On front center of roof.
Hands-Free Microphone	On front center of roof.
Low Beam Headlight Relay Shorting Clip	In left side of engine compartment, in fuse & relay box.
Recirculated Air Flap Element	Behind right side of dash.
Transponder Coil	Top right side of steering column, on ignition switch.

CONNECTORS

CONNECTORS LOCATION

Component	Component Location
X2/4 (Black, 2-Pin)	Behind radio.
X11/4 (Black, 16-Pin)	Below left side of dash.
X18 (Red, 28-Pin)	Behind center of dash.
X18/1 (Black, 9-Pin)	Under tailgate trim.
X18/A_B (Black, 16-Pin)	At right kick panel.
X18/2 (1) (White, 10-Pin)	At left rear of engine compartment.
X18/2 (2) (4-Pin)	At left rear of engine compartment, in E-box.

X18/2 (3) (Black, 6-Pin)	At left rear of engine compartment.
X18/3 (Black, 10-Pin)	Behind left rear wheel.
X18/5 (Black, 3-Pin)	Under trim, at left rear of cargo area.
X18/6 (Black, 3-Pin)	At left rear of cargo area.
X18/7 (Black, 9-Pin)	At left side of engine compartment.
X18/10 (3-Pin)	At left rear of engine compartment, in E-box.
X18/11 (Black, 2-Pin)	Behind left headlight.
X18/18 (3-Pin)	Behind radio.
X18/23 (Black, 3-Pin)	At left side of engine compartment, in E-box.
X18/26 (Black, 14-Pin)	At left rear of engine compartment, in E-box.
X18/27 (Black, 8-Pin)	At left side of engine compartment, in E-box.
X18/28 (Black, 8-Pin)	At left side of engine compartment, in E-box.
X18/28 (2) (Natural, 14-Pin)	At left rear of engine compartment, in E-box.
X18/31 (Black, 24-Pin)	At left side of engine compartment, in E-box.
X18/33 (Black, 3-Pin)	At left side of engine compartment, in E-box.
X22 (Black, 14-Pin)	At left side of engine compartment, in E-box.
X28/3 (Black, 2-Pin)	Under right front seat.
X35/1 (Black, 20-Pin)	In left front door jamb.
X35/2 (Black, 20-Pin)	In right front door jamb.
X35/3 (Black, 20 Pin	In left rear door jamb.
X35/4 (Black, 20-Pin)	In right rear door jamb.
X35/27 (Black, 3-Pin)	Behind center of dash.
X35/28 (Black, 6-Pin)	Behind rear bumper.
X39 (1) (Clear, 10-Pin)	Behind radio.
X39 (2) (10-Pin)	Under center console.
X39/15x1 (2-Pin)	At rear of center console.
X39/15x2 (2-Pin)	At rear of center console.
X39/37 (2-Pin)	Under front passenger seat.
X52 (16-Pin)	Under trim, at left rear of cargo area.
X54/1 (Red, 2-Pin)	Under left front seat.
X54/9 (White, 2-Pin)	Under right front seat.
X54/10 (Green, 2-Pin)	Under left front seat.
X54/20 (Black, 2-Pin)	At rear of left front seat.
X55/3 (Black, 16-Pin)	Under left front seat.
X55/4 (Black, 16-Pin)	Under right front seat.
X58 (13-Pin)	On rear bumper.
X58/1 (White, 2-Pin)	At lower right side of dash.
X58/3 (Green, 2-Pin)	Behind radio.
X58/4 (White, 2-Pin)	At right rear of cargo area.
X64/7 (Black, 2-Pin)	Behind right headlight.
X64/10 (1) (Black, 6-Pin)	Below rear of center console.

	Below rear of center console.
X85/8 (2-Pin)	Behind right side of dash.
X85/9 (2-Pin)	At left rear of engine compartment, in E-box.
X88/17 (Black, 2-Pin)	At left side of engine compartment, in E-box.

GROUNDS

GROUNDS LOCATION

Component	Component Location
W2	Behind right headlight. See **Fig. 1** .
W2/1	Behind right headlight. See **Fig. 1** .
W6	Behind trim at left rear of cargo area. See **Fig. 1** .
W7	Behind trim at right rear of cargo area. See **Fig. 1** .
W8	Behind trim on tailgate. See **Fig. 1** .
W9	Behind right headlight.
W11/3	At top center front of engine. See **Fig. 1** .
W16	At left rear of engine compartment. See **Fig. 1** .
W16/4	At right rear of engine compartment. See **Fig. 1** .
W16/6	At right rear of engine compartment. See **Fig. 1** .
W18	Under left front seat, under carpet. See **Fig. 1** .
W19	Under right front seat, under carpet. See **Fig. 1** .
W26	Under center console, on SRS mounting bolt. See **Fig. 1** .
W29/2	At right kick panel.

SPLICES

SPLICES LOCATION

Component	Component Location
Z01	In telephone harness.
Z02	In telephone harness.
Z3/29	In motor harness, at left rear of engine compartment.
Z3/29a	In motor harness, under plastic harness channel.
Z3/29b	In motor harness, in E-box.
Z6/8	In motor harness.
Z7/35	In motor harness, under plastic harness channel.
Z7/36	In motor harness, under plastic harness channel.
Z28/5	In right front door harness.
Z28/6	In left front door harness.
Z28/25	In passenger harness, near breakout to left rear door.
Z28/26	In passenger harness, near breakout to left rear door.

Z36/1	In rear bumper harness, near X35/28.
Z36/2	In rear bumper harness, near X35/28.
Z36/3	In front bumper harness, between breakouts to left inner sensor & right inner sensor.
Z36/4	In front bumper harness, between breakouts to left inner sensor & right inner sensor.
Z42	In passenger harness, near breakout to X18.
Z50/1	In dash harness, behind instrument cluster, near breakout to instrument cluster connector.
Z50/2	In dash harness, center, near breakout to A/C control module.
Z50/3	In dash harness, near breakout to passenger harness to dash harness connector.
Z50/4	In dash harness, near breakout to icing sensor.
Z50/5	In dash harness, behind instrument cluster, between breakouts to parking brake switch & stoplight switch.
Z50/6	In dash harness, behind instrument cluster, near breakout to instrument cluster connector.
Z50/8	In dash harness, in breakout to starter switch.
Z50/9	In dash harness, behind instrument cluster, between breakouts to parking brake switch & stoplight switch.
Z50/11	In dash harness, behind instrument cluster, near breakout to instrument cluster connector.
Z50/12	In dash harness, behind instrument cluster, between breakouts to parking brake switch & stoplight switch.
Z50/13	In dash harness, in breakout to starter switch.
Z50/14	In dash harness, near breakout to parking brake switch.
Z50/17	In dash harness, near entrance to E-box.
Z50/18	In dash harness, in breakout to data link connector.
Z50/20	In dash harness, in E-box.
Z50/21	In dash harness, near breakout to PTC heater relays.
Z50/22	In dash harness, near breakout to PTC heater relays.
Z50/24	In dash harness, near breakout to PTC heater.
Z50/26	In dash harness, in breakout to combination switch.
Z50/27	In dash harness, in breakout to combination switch.
Z50/28	In dash harness, in E-box.
Z50/29	In dash harness, near breakout to A/C control module.
Z50/30	In dash harness, near breakout to A/C control

	module.
Z50/31	In dash harness, in E-box.
Z50/32	In dash harness, near breakout for center nozzle air stream temperature sensor.
Z50/33	In dash harness, in breakout to combination switch.
Z50/34	In dash harness, behind instrument cluster, between breakouts to parking brake switch & stoplight switch.
Z51/1	In passenger harness, in breakout to dash connector X18.
Z51/2	In passenger harness, in breakout to dash connector X18.
Z51/3	In passenger harness, in E-box.
Z51/4	In passenger harness, in E-box.
Z51/5	In passenger harness, near breakout for radio & SRS control module.
Z51/6	In passenger harness, in breakout to electronic selector lever module control module.
Z51/7	In passenger harness, in breakout to electronic selector lever module control module.
Z51/8	In passenger harness, under right side of dash.
Z51/9	In passenger harness, near breakout to W18.
Z51/11	In passenger harness, near breakout to radio & SRS control module.
Z51/12	In passenger harness, in breakout to radio.
Z51/13	In passenger harness in engine compartment, in breakout to engine control module connector C4.
Z51/14	In passenger harness, in E-box.
Z51/15	In passenger harness, near breakout to radio.
Z51/16	In passenger harness, in breakout to X18.
Z52/1	In passenger harness, near breakout to trailer connector X52.
Z52/4	In passenger harness, in main harness breakout for left side of vehicle.
Z52/5	In passenger harness, near breakout to tailgate harness.
Z52/6	In passenger harness, near breakout to tailgate harness.
Z52/8	In passenger harness, in main harness breakout for left side of vehicle.
Z52/9	In passenger harness, in main harness breakout for right side of vehicle.
Z52/10	In passenger harness, in breakout to dash connector

	X18.
Z52/11	In passenger harness, in breakout to dash connector X18.
Z52/14	In passenger harness, in main harness breakout for left side of vehicle.
Z52/15	In passenger harness, near breakout to radio & SRS control module.
Z53/1	In passenger harness, in main harness breakout for left side of vehicle.
Z53/2	In passenger harness, in main harness breakout for left side of vehicle.
Z53/4	In passenger harness, near breakout to trailer connector X52.
Z53/5	In passenger harness, in main harness breakout for right side of vehicle.
Z53/6	In passenger harness, near breakout to trailer connector X52.
Z53/7	In passenger harness, near breakout to dash connector X18.
Z53/8	In passenger harness, in main harness breakout for right side of vehicle.
Z53/9	In passenger harness, under center console in plastic harness channel.
Z53/16	Under right front seat.
Z53/17	In passenger harness, in main harness breakout for right side of vehicle.
Z53/18	In passenger harness, in E-box.
Z53/20	Under front of center console.
Z53/21	In passenger harness, near breakout to dash connector X18.
Z53/23	In passenger harness, in breakout to ABS module.
Z53/24	In passenger harness, in breakout to ABS module.
Z54/1	In headliner harness, in breakout for right sun visor connector.
Z54/2	In headliner harness, in breakout for right sun visor connector.
Z54/3	In headliner harness, in breakout for rear dome light.
Z54/7	In headliner harness, near breakout to left sun visor connector.
Z54/8	In headliner harness, near breakout to left sun visor connector.
Z54/9	In headliner harness, in breakout for W7.

Z54/10	In headliner harness, in breakout for W7.
Z55/1	In tailgate harness, near breakout to tailgate CL actuating motor, rear wiper motor & license plate lights.
Z56/1	Behind left headlight.
Z56/2	Behind left headlight.
Z56/4	Behind left headlight.
Z56/5	Behind left headlight.
Z56/6	Behind left headlight.
Z56/7	In breakout to fanfare horns.
Z57/1	Behind right headlight.
Z57/2	In E-box.
Z57/3	In right engine harness, near breakout to wiper motor.
Z57/7	In E-box.
Z58/1	In trailer harness.
Z58/8	In trailer harness.
Z59/1	In door mounted spare tire harness.
Z59/2	In door mounted spare tire harness.
Z59/3	In left/right door harness.
Z59/4	In left/right rear door harness.
Z60/4	In foglight harness.
Z60/5	In foglight harness.
Z61	In dash harness, near breakout to parking brake switch.
Z61/5	Under center console, near breakout for lower control field control module connector C3.
Z61/6	Under center console, near breakout for lower control field control module connector C3.
Z87/17	Behind radio.
Z87/18	Behind radio.
Z99/6	In motor harness, in E-box.
Z99/7	In motor harness, in E-box.

COMPONENT LOCATION GRAPHICS

NOTE: Figures may show multiple component locations. Refer to appropriate table for proper figure references.

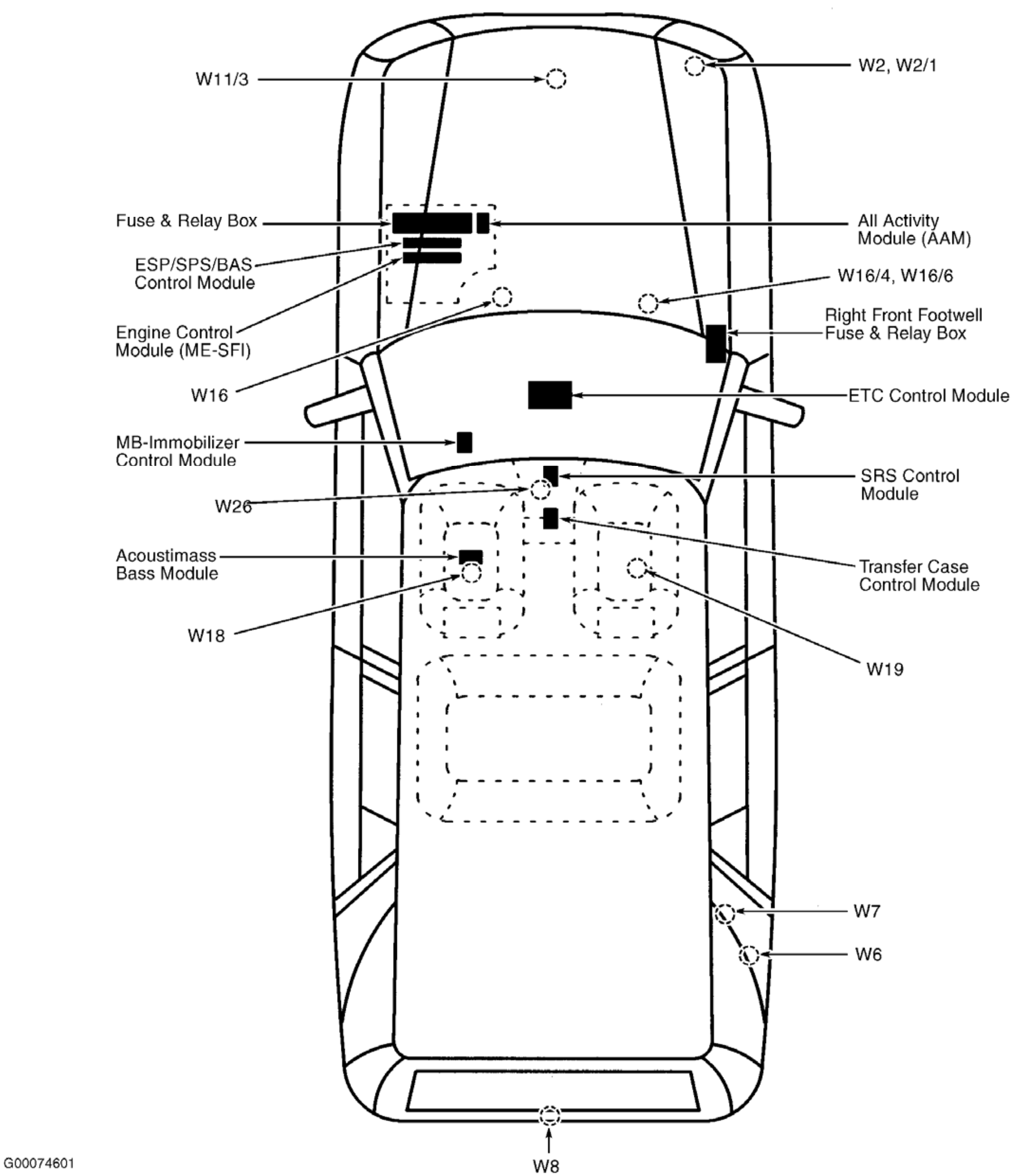

W11/3
W2, W2/1
Fuse & Relay Box
All Activity
Module (AAM)
ESP/SPS/BAS
Control Module
W16/4, W16/6
Right Front Footwell
Fuse & Relay Box
Engine Control
Module (ME-SFI)
W16
ETC Control Module
MB-Immobilizer
Control Module
SRS Control
Module
W26
Acoustimass
Bass Module
Transfer Case
Control Module
W18
W19
W7
W6
W8
G00074601

Fig. 1: Plan View Of Vehicle
Courtesy of MERCEDES-BENZ OF NORTH AMERICA.